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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,339	07/09/2004	Ryuichi Furukoshi	082416-000700US	2026

20350 7590 10/20/2006

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EXAMINER

HAN, YOUNGHUIE JESSICA

ART UNIT PAPER NUMBER

2838

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental

Notice of Allowability

Application No.

10/530,339

Examiner

Y. J. Han

Applicant(s)

FURUKOSHI ET AL.

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an interview conducted on 9/28/06.
2. ☒ The allowed claim(s) is/are 2,4,6,7,9 and 11.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

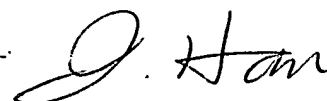
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 9/28/06.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



J. Han
Primary Examiner
Art Unit: 2838

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Raymond Hom on 9/28/06.

The application has been amended as follows:

Claims 1-11 are originally filed on 7/9/2004 (preliminary amendment). Claims 1, 3, 5, 8, and 10 are canceled and claims 2, 4, 7, and 9 are amended (as shown in PCT/JP 03/00161 – PCT/IPEA/409, received on 3/31/2004).

IN THE CLAIMS:

Claims 1, 3, 5, 8, and 10 are canceled.

1.(Deleted)

2.(Amended) A power source apparatus comprising: a conversion circuit (40, 60, 34, 32, 91,100, 80) which performs conversion of an input voltage into an output voltage different from the input voltage; and a driving power source (33) which is charged with the input voltage to drive said conversion circuit (40, 60, 34, 32, 91,100, 80),
wherein: said conversion circuit (40, 60, 34, 32, 91,100, 80) includes

a transformer (32a, 32b) which has a primary winding and a secondary winding which are inductively coupled to each other,

a switching circuit (40, 60, 34, 80) which applies the input voltage to said primary winding intermittently,

a rectifier circuit (91) which rectifies a voltage which is induced in said secondary winding,

a detection circuit (100) which detects that a standby signal is supplied, and supplies a detection signal representing a detection result to said switching circuit (40, 60, 34, 80) via a predetermined signal line; and

a feedback circuit (104, 105) which generates a feedback signal comprising a current that increases as the output voltage increases, and which supplies the generated feedback signal to said switching circuit (40, 60, 34, 80) via said signal line;

said switching circuit (40, 60, 34, 80) determines whether or not said detection circuit (100) supplies the detection signal representing that the standby signal is detected;

in a case where determining that the standby signal is not detected, said switching circuit (40, 60, 34, 80) starts applying the input voltage intermittently when a voltage of said driving power source (33) rises to a first turn-on voltage, stops applying the input voltage when the voltage of said driving power source (33) lowers to a predetermined turn-off voltage, and sets timings of intermittence of the input voltage based on the feedback signal so that the output voltage may be stabilized at a predetermined first value; and

in a case where determining that the standby signal is detected, said switching circuit (40, 60, 34, 80) stabilizes the output voltage at equal to or lower than a predetermined second

value which is lower than the first value, by starting applying the input voltage intermittently when the voltage of said driving power source (33) rises to a second turn-on voltage which is lower than the first turn-on voltage and higher than the turn-off voltage, and by stopping applying the input voltage when the voltage of said driving power source (33) lowers to the turn-off voltage.

3.(Deleted)

4.(Amended) The power source apparatus according to claim 2, wherein: said detection circuit (100) supplies the feedback signal as the detection signal, by controlling said feedback circuit (104, 105) so that a value represented by the feedback signal may be a predetermined value,

in response to that the standby signal is supplied; and

said switching circuit (40, 60, 34, 80) determines whether or not said detection circuit (100) detects the standby signal, based on the value represented by the feedback signal.

5.(Deleted)

6.(Original) The power source apparatus according to claim 2, further comprising:

a tertiary winding (32c) which is inductively coupled to said primary winding; and

an auxiliary rectifier circuit (35) which rectifies a voltage induced in said tertiary winding (32c),

wherein said driving power source (33) is also charged with a voltage obtained by rectification by said auxiliary rectifier circuit (35).

7.(Amended) A power source apparatus comprising: a conversion circuit (40, 60, 34, 32, 91, 100, 80) which performs conversion of an input voltage into an output voltage different from the input voltage; and a driving power source (33) which is charged with the input voltage to drive said conversion circuit (40, 60, 34, 32, 91, 100, 80),

wherein: said conversion circuit (40, 60, 34, 32, 91, 100, 80) includes

a coil (111),

a switching circuit (40, 60, 34, 80) which applies the input voltage to said coil (111) intermittently,

a rectifier circuit (91) which rectifies a voltage induced in said coil (111),

a detection circuit (100) which detects that a standby signal is supplied, and supplies a detection signal representing a detection result to said switching circuit (40, 60, 34, 80) via a predetermined signal line; and

a feedback circuit (104, 105) which generates a feedback signal comprising a current that increases as the output voltage increases, and which supplies the generated feedback signal to said switching circuit (40, 60, 34, 80) via said signal line;

said switching circuit (40, 60, 34, 80) determines whether or not said detection circuit (100) supplies the detection signal representing that the standby signal is detected;

in a case where determining that the standby signal is not detected, said switching circuit (40, 60, 34, 80) starts applying the input voltage intermittently when a voltage of said driving power source (33) rises to a first turn-on voltage, stops applying the input voltage when the voltage of said driving power source (33) lowers to a predetermined turn-off voltage, and sets timings of intermittence of the input voltage based on the

feedback signal so that the output voltage may be stabilized at a predetermined first value; and

in a case where determining that the standby signal is detected, said switching circuit (40, 60, 34, 80) stabilizes the output voltage at equal to or lower than a predetermined second value which is lower than the first value, by starting applying the input voltage intermittently when the voltage of said driving power source (33) rises to a second turn-on voltage which is lower than the first turn-on voltage and higher than the turn-off voltage, and by stopping applying the input voltage when the voltage of said driving power source (33) lowers to the turn-off voltage.

8.(Deleted)

9.(Amended) The power source apparatus according to claim 7,

wherein: said detection circuit (100) supplies the feedback signal as the detection signal, by controlling said feedback circuit (104, 105) so that a value represented by the feedback signal may be a predetermined value, in response to that the standby signal is supplied; and said switching circuit (40, 60, 34, 80) determines whether or not said detection circuit (100) detects the standby signal, based on the value represented by the feedback signal.

10.(Deleted)

11.(Original) The power source apparatus according to claim 7, further comprising:

an auxiliary coil (112) which is inductively coupled to said coil (111); and

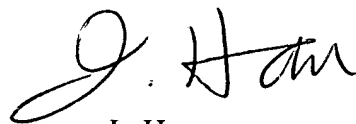
an auxiliary rectifier circuit (113) which rectifies a voltage induced in said auxiliary coil (112),

wherein said driving power source (33) is also charged with a voltage obtained by rectification by said auxiliary rectifier circuit (113).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y. J. Han whose telephone number is 571-272-2078. The examiner can normally be reached on Mon-Fri 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'J. Han', is positioned above the printed name and title.

J. Han
Primary Examiner
Art Unit 2838